REMARKS

Claims 1 – 37 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Li et al. (U.S. Pat. No. 6,748,313). This rejection is respectfully traversed.

Applicant notes that claim 1 includes a controller that determines a predicted CAF signal into an engine based on a current estimated CAF signal, a current actual MAF signal, a current MAP signal, a current TPS signal, a MAF transient signal and a MAP transient signal. Li fails to teach or suggest a controller that determines a predicted CAF signal into an engine based on a current estimated CAF signal, a current actual MAF signal, a current MAP signal, a current TPS signal, a MAF transient signal and a MAP transient signal.

Li discloses a system for estimating a cylinder air charge (CAC) based on a MAP signal and/or a MAF signal. More specifically, during a transient state, the system primarily uses the MAP signal to estimate CAC (see Col. 5, Lines 3 – 9) and during a steady-state, the system primarily uses a MAF signal to estimate CAC (see Col. 4, Line 65 – Col. 5, Line 3). During a transition from the transient state to the steady-state, the system uses both the MAP and MAF signals and a smoothing algorithm (see Equation 5) to estimate CAC (see Col. 6, Lines 24 – 34). CAC_{MAF} is determined based on the MAF signal as processed through a manifold-filling equation (see Col. 6, Line 65 – Col.

7, Line 5) and CAC_{MAP} is determined based on the MAP signal as processed through a known speed-density equation (see Col. 7, Lines 6 – 11). A final CAC (CAC_{FINAL}) is determined based on CAC_{MAF}, CAC_{MAP} and a ratio of a profile ignition pick-up (PIP) count (i.e., n_p and n_f) (see Equation 5).

The disclosure of Li is limited to estimating CAC based on MAF and MAP signals. Therefore, Li fails to teach or suggest determining a predicted CAF signal into an engine based on a current estimated CAF signal, a current actual MAF signal, a current MAP signal, a current TPS signal, a MAF transient signal and a MAP transient signal. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Claims 2 – 14 each ultimately depend from claim 1, which defines over the prior art, as discussed in detail above. Therefore, claims 2 – 14 also define over the prior art for at least the reasons stated with respect to claim 1.

ALLOWABLE SUBJECT MATTER

Applicant thanks the Examiner for recognizing the allowable subject-matter of claims 15 – 37. The Examiner has further stated that claims 2 – 14 would be allowable if rewritten in independent form. Applicant has presently refrained from amending any of claims 2 – 14 in view of the discussion herein.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: 6/21/05

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